

OIB - HU-25C Guardian 10/21/15 Science Report

Aircraft:

[HU-25A Guardian #525](#) ([See full schedule](#))

Date:

Wednesday, October 21, 2015

Mission:

OIB

Mission Location:

Kangerlussuaq, Greenland

Mission Summary:

Mission: Falcon K-EGIG-Summit (priority: high)

This mission is a shortened version of the baseline-priority ?K-EGIG-Summit? flight last flown in Spring 2015. This version retains the three upper IceSat-1 lines in the upper Jakobshavn catchment area, the western half of the EGIG line, and the overflights of the K-Transect sites near Kangerlussuaq, but eliminates the eastern portion of the EGIG line and the IceSat-1 and IceSat-2 cal/val lines near Summit Station.

Weather has been a problem for this high-priority flight since we arrived in Kangerlussuaq two weeks ago. A stubborn low to mid-level stratus deck has straddled Greenland's central ice divide for that entire period of time, making it impossible for our optical sensors to see the surface here. However, our two most-trusted weather models (ECMWF and GFS) predicted that this cloud deck would retreat north overnight last night and during the morning today. This morning as we perused the infrared weather satellite images collected overnight, we saw that this was exactly what was actually happening. For these stubborn clouds to finally dissolve on the morning of our last full day of flight operations brought to mind the Biblical story of the parting of the Red Sea (admittedly stretching a metaphor well past its breaking point). Happily we did not have an Egyptian army in hot pursuit of us, but we did enjoy clear skies and a smooth ride throughout this flight. We believe that we achieved 100% successful data collection for the mission.

All instruments performed well.

We conducted a ramp pass at 5000' MSL just prior to landing.

Data volumes:

DMS: 23.3 Gb

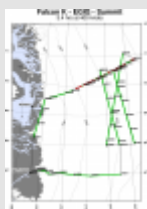
Narrow Swath ATM: 19 Gb

FLIR: 1.9 Gb

total data collection time: 3.5 hrs

Images:

Map of Falcon - K-EGIG-Summit



[Read more](#)

Navigation display during K-Transect



[Read more](#)

Calving front of Jakobshavn Glacier



[Read more](#)

Submitted by:

John Sonntag on 10/21/15

Related Flight Report:

HU-25C Guardian 10/21/15

Flight Number:

OIB2015 Arctic K-EGIG-Summit

Payload Configuration:

ATM & DMS

Nav Data Collected:

No

Total Flight Time:

3.7 hours

Submitted by:

Luci Crittenden on 10/21/15

Flight Segments:

From:	BGSF	To:	BGSF
Start:	10/21/15 14:30 Z	Finish:	10/21/15 18:12 Z
Flight Time:	3.7 hours		
Log Number:	16F002	PI:	John Woods
Funding Source:	Thomas Wagner - NASA - SMD - ESD Cryosphere & International Polar Year		
Purpose of Flight:	Science		
Comments:	OIB HU-25 Falcon completed the K-EGIG-Summit mission out of Kangerlussuaq today. Tentative plan is for a short mop-up science mission tomorrow morning(October 22) and weather permitting commence the transit back to the US in the afternoon.		

Flight Hour Summary:

	15F005	16F002
Flight Hours Approved in SOFRS	100	
Flight Hours Previously Approved		67.4
Total Used	32.6	65.3
Total Remaining		2.1

16F002 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
10/05/15	OIB2015 Arctic Sea Ice Central	Science	3.6	3.6	63.8
10/05/15	OIB2015 Arctic Sea Ice East	Science	3.8	7.4	60
10/06/15	OIB2015 Arctic Ice-Sat2 North	Science	4	11.4	56
10/07/15	OIB2015 Arctic Transit Thule to Kangerlussuaq	Transit	2	13.4	54
10/08/15	OIB2015 Arctic Southwest Coastal A	Science	3.8	17.2	50.2
10/08/15	OIB2015 Arctic Thomas-Jakobshavn 01	Science	3.7	20.9	46.5

10/09/15	OIB2015 Arctic Umanaq B	Science	3.9	24.8	42.6
10/13/15	OIB2015 Arctic Jakobshavn Equip Store	Science	2.9	27.7	39.7
10/13/15	OIB2015 Arctic Southeast Coastal A	Science	3.6	31.3	36.1
10/18/15	OIB2015 Arctic Southeast Coastal B	Science	4.1	35.4	32
10/19/15	OIB2015 Arctic Helheim-Kangerdlugussuaq	Science	3.7	39.1	28.3
10/19/15	OIB2015 Arctic Helheim-Kangerdlugussuaq Gap B	Science	3.9	43	24.4
10/20/15	OIB2015 Arctic Jakobshavn Mop-Up	Science	3.7	46.7	20.7
10/20/15	OIB2015 Arctic Southwest Coastal B	Science	3.7	50.4	17
10/21/15	OIB2015 Arctic Southwest Coastal C	Science	3.4	53.8	13.6
10/21/15	OIB2015 Arctic K-EGIG-Summit	Science	3.7	57.5	9.9
10/22/15	OIB2015 Arctic Mopup South	Science	2	59.5	7.9
10/22/15	OIB2015 Arctic Ferry BGSF-CYYR	Ferry	2.2	61.7	5.7
10/23/15	OIB2015 Arctic Ferry CYYR-KRIC	Ferry	3.3	65	2.4
10/23/15	OIB2015 Arctic Ferry CYYR-KRIC	Ferry	0.3	65.3	2.1

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Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

15F005 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
09/15/15	OIB #1	Check	2.7	2.7	97.3
09/20/15	OIB #2, 3, 4	Ferry	2.7	5.4	94.6
09/21/15	OIB #2, 3, 4	Ferry	2.3	7.7	92.3
09/21/15	OIB #2, 3, 4	Ferry	2	9.7	90.3
09/23/15	OIB2015 Arctic North Central Gap 02	Science	3.9	13.6	86.4
09/24/15	OIB2015 Arctic Northwest Coastal A	Science	3.7	17.3	82.7
09/25/15	OIB2015 Arctic Northwest Coastal B	Science	3.8	21.1	78.9
09/28/15	OIB2015 Arctic Sea Ice West	Science	3.7	24.8	75.2
09/30/15	OIB2015 Arctic North Central Gap 01	Science	3.9	28.7	71.3
09/30/15	OIB2015 Arctic Zachariae-79N	Science	3.9	32.6	67.4